

# Mapping Metaphor with the Historical Thesaurus: A New Resource for Investigating Metaphor in Names

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## Abstract

The AHRC-funded 'Mapping Metaphor with the Historical Thesaurus' project has traced the development of metaphor in English from Anglo-Saxon times to the present day using the unique evidence base of the *Historical Thesaurus of the Oxford English Dictionary*. The Historical Thesaurus organises the contents of the OED semantically, making it possible to see how vocabulary for any given concept has developed over time. One of the major outputs of the Mapping Metaphor project is the online Metaphor Map, which can be used to investigate metaphor in names and is freely available at: <http://mappingmetaphor.arts.gla.ac.uk/>.

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## Introduction

Linguistic interest in metaphor, following Lakoff and Johnson (1980), has focused on metaphor in everyday language, such as the systematic connection between heat in the material world and abstract concepts of anger or emotion (cf. *fuming*, *inflamed*). Until now, however, the lack of a comprehensive data source has made it difficult to obtain an overview of this phenomenon for the history of English. Such a data source is now available, following the completion of the University of Glasgow's Historical Thesaurus (HT) database (published as the *Historical Thesaurus of the Oxford English Dictionary*, Kay *et al.* 2009). The present paper describes a project which has used this unique evidence base to create an online Metaphor Map of English, and discusses some of the ways in which it can be used to investigate metaphor in names.

## The Mapping Metaphor Project

As the world's first historical thesaurus for any language, HT contains the full recorded vocabulary of the English language, from Old English to the present day. It is based on the *Oxford English Dictionary* (2nd edn.) and *A Thesaurus of Old English* (Roberts and Kay 2000), and comprises:

- 793,742 word forms
- 225,131 semantic categories
- Attestation dates/spans for all word senses

A unique feature of the HT is that rather than ordering words alphabetically as in a dictionary, the HT presents words ordered by meaning, in a complex hierarchical system of semantic categories. Categories are organised hierarchically, with:

- 3 Level 1 categories (The External World, The Mental World, The Social World)
- 37 Level 2 categories (e.g. Physical Sensibility, Emotion, Society/the Community)
- 377 Level 3 categories (e.g. Colour, Beauty, Punishment)

The ‘Mapping Metaphor with the Historical Thesaurus’ project was funded by the Arts and Humanities Research Council between 2012 and 2015 (reference AH/I02266X/1). The Principal Investigator was Wendy Anderson, with Marc Alexander, Carole Hough and Christian Kay as Co-Investigators, Ellen Bramwell as Research Associate, Flora Edmonds as Project Technician, Brian Aitken as Website and Visualization Developer, and Rachael Hamilton as PhD student and Project Assistant. The project used HT to metaphorically ‘map’ areas of connected meaning to find where metaphorical transfer may have occurred. First, automated routines identified ‘overlapping’ words, i.e. words represented in more than one semantic category. Then, manual analysis was used to isolate instances of overlap due to metaphorical transfer from those due to homonymy or non-metaphorical polysemy. For more detail on the project’s methodology, see Alexander and Bramwell (2014) and Anderson and Bramwell (2014).

## The Metaphor Map of English

One of the main outputs of the ‘Mapping Metaphor’ project is an online Metaphor Map of English, freely available at: <http://mappingmetaphor.arts.gla.ac.uk/>.

The screenshots below in Figures 1, 2 and 3 show a progression through the online Metaphor Map of English, from the initial page through the data visualization, to the ‘Metaphor card’ showing information on the metaphorical link between the categories of 1A05 ‘Landscape, high and low land’ and 1B11 ‘Body parts’. Each stage of the data visualization allows the user to delve further into the data and explore other, related connections. In addition to this diagrammatic view of the data, every category and its links can also be viewed in table form, as a series of detailed ‘Metaphor cards’, and as a timeline which shows the period in which we find the first evidence of each link in the data. For more information on how to use the different views of the data, there are instructions for users on the website at: <http://mappingmetaphor.arts.gla.ac.uk/how-to-use/>

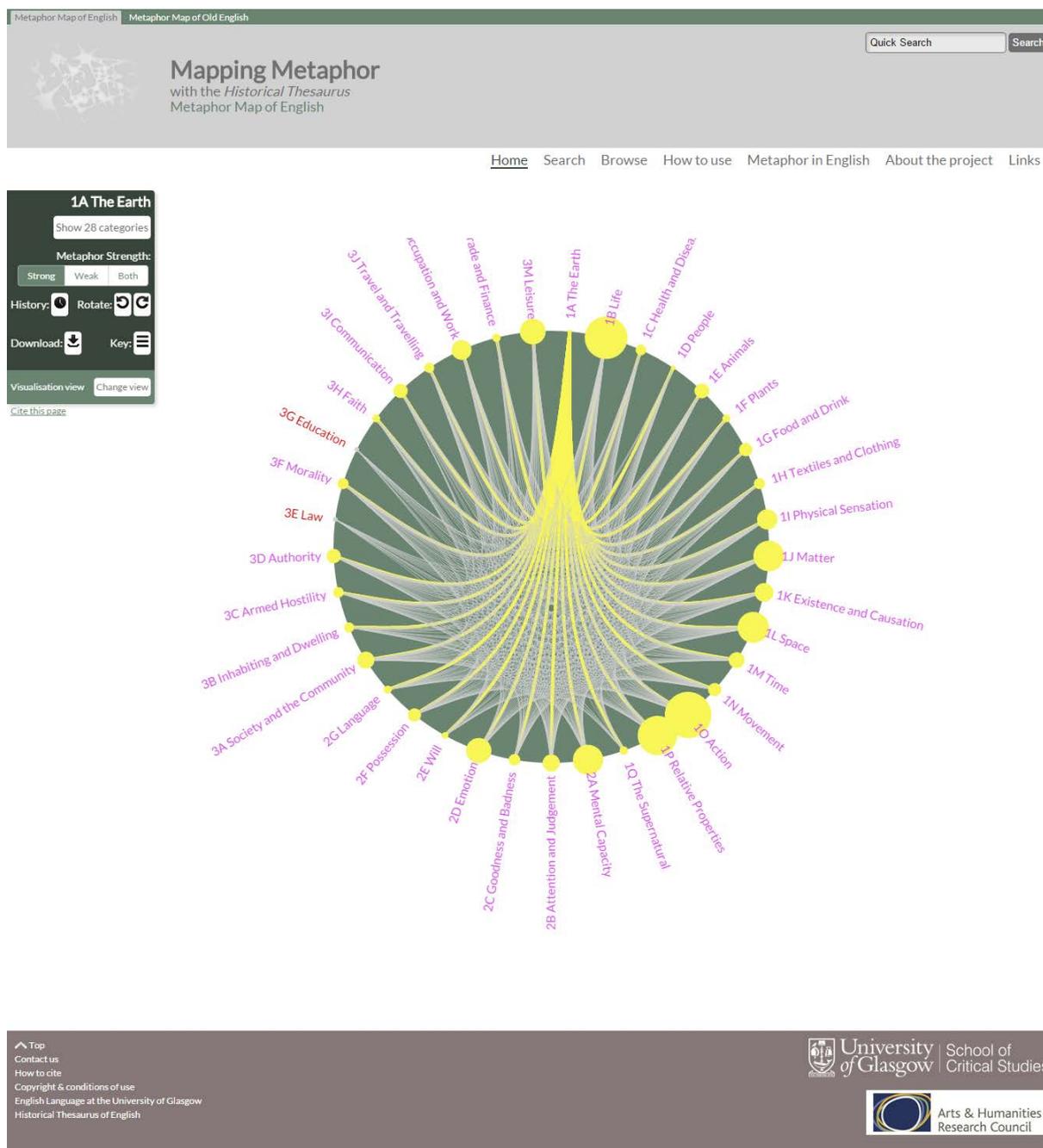


Fig. 1. This shows the front page of the Metaphor Map of English website, with the full visualization of all the data in the HT

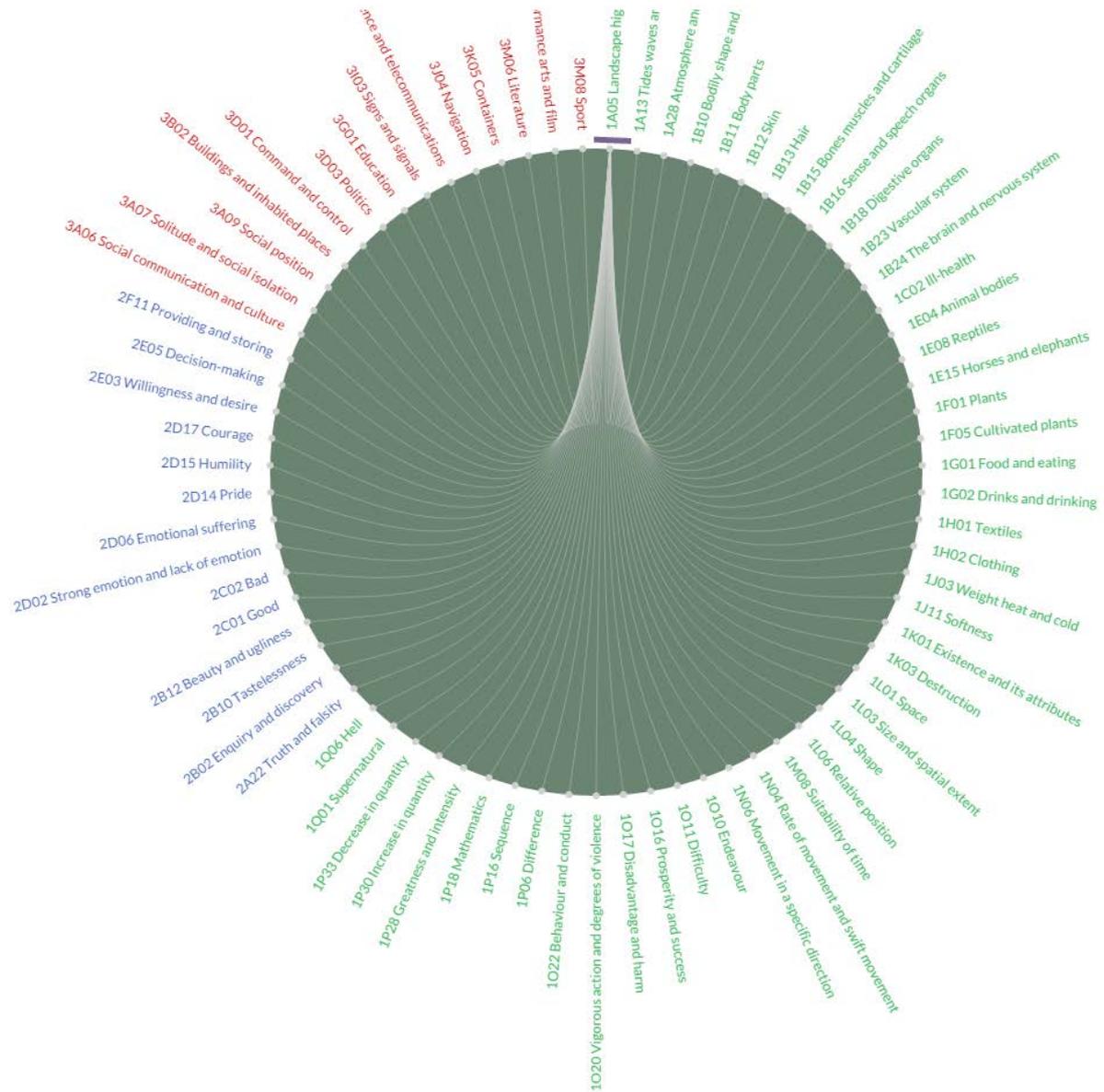


Fig. 2. This shows all metaphorical links which the Mapping Metaphor team has identified between category 1A05 'Landscape, high and low land' and all other areas of the HT



Fig. 3. This shows the ‘Metaphor card’ with information on the metaphorical link from 1B11 ‘Body parts’ to 1A05 ‘Landscape, high and low land’

Figure 3 shows the full information which has been established for the metaphor link. This includes the first dates in which we find evidence for this link in the data, examples of words which instantiate the link (which can be clicked on to take the user directly to that sense in the HT), an indication of whether the link is systematic (strong) or weak, and an arrow showing the direction of the metaphor link between categories. In this case the arrow indicates that body parts are being used to describe words in the landscape.

## Metaphor and Semantic Change

Metaphor is one of the main agents in the development of polysemy and semantic change. Semantic change driven by metaphor is traditionally assumed to proceed from concrete to abstract domains (cf. SOCIAL ORGANISATIONS ARE PLANTS, in which the source domain ‘plants’ is more concrete than the target ‘social organisations’ – hence the abstract sense

‘branch’ (of a bank) developed from the concrete sense ‘branch’ (of a tree)). The ‘Mapping Metaphor’ project has allowed us to identify large-scale patterning, and gives us a context within which to explore possible counter-examples (cf. also Allan 2008).

## Metaphor and Place Names

The ‘Mapping Metaphor’ resource facilitates a comparison between uses of metaphor in ordinary language and in place names, as a first step towards the systematic comparison of lexical and onomastic fields proposed by Nicolaisen at the 1978 ICOS in Cracow. In contrast to comparative analyses of grammatical structures (e.g. Koopman 1979), little work has been done in this area. Preliminary research suggests that there are broad similarities, in that like other areas of language, place names also show landscape features conceptualised in terms of body parts, containers and so on. Examples include Shank Burn, Tongue Burn and Cauldron Linn, all in Kinross-shire in east central Scotland. At the same time, however, there are differences in how the metaphors are manifested. For instance, body terms in place names often represent metaphorical senses also found in the lexicon, but sometimes reflect developments apparently restricted to the toponymicon:

OE *mub(a)* ‘mouth’ can refer to the mouth of a living creature or to the mouth of a river both in place-names and in lexis, but the most common use of OE *fof* ‘foot’ in place-names is an otherwise unattested sense in relation to land at the mouth of a stream ..., and only in toponyms is OE *cneow* ‘knee’ used for the bend in a river or road, OE *heafod* ‘head’ of a projecting piece of ground, or OE *tunge* ‘tongue’ for a strip of land. (Hough 2010: 12)

It is less usual for a topographical meaning to be attested in the lexicon but not the onomasticon, as with the use of OE *hrycg* ‘back’ to refer to the crest of a wave.

## Metaphorical Connections with Landscape

The Metaphor Map provides lexicographical evidence for the ways we conceptualise landscape features through metaphor. Landscape features can be found in The External World, the first primary division of the HT, which is divided into sub-categories: 1A01 ‘The world and the earth’, 1A02 Region of the earth’, 1A03 ‘Cardinal points’, 1A04 ‘Land and islands’, 1A05 Landscape, high and low land’, and so on. Some examples of categories that hold strong metaphorical connections with the 1A05 ‘Landscape, high and low land’ category are shown in Table 1.

MM Category	Examples
1B11 Body parts	<i>arm, back, bosom, knee, neck, side, shoulder</i>
1E04 Animal body	<i>horn, hump, snout</i>
1H01 Textiles	<i>carpet, patch, patchwork, ribbon</i>
1H02 Clothing	<i>apron, belt, gusset, gore</i>
3B02 Inhabited place	<i>cabin, chimney, floor, roof, stairway</i>
3K05 Containers	<i>basin, bowl, cauldron, funnel, kettle, pan</i>

Table 1. Metaphorical connections held with the landscape

One of the most common motivations for metaphors of the landscape is shape. Body parts are regularly used to describe the distinctive shape of a landscape feature, as discussed above, and examples from the Metaphor Map include those from humans: *arm, back, bosom, knee, neck, side* and *shoulder*; and animals: *horn, hump* and *snout*. In addition to the well-known LANDSCAPE IS A BODY metaphor, the Metaphor Map provides evidence of links with several other areas of meaning.

While shape is again a common feature, many metaphors draw on more than one aspect of the source term. The transferred sense of *patchwork*, for example, draws on elements of both shape and colour. *Cauldron* can describe either shape or agitation of a body of water. Links with inhabited spaces include *chimney*, describing the cleft of a hill or venting of heat, and *roof*, describing aspects of height and shelter. A more detailed analysis of the full set of metaphorical connections with 1A05 ‘Landscape, high and low land’ is presented in Hough (2016), and includes a number of links for which this is the source rather than the target category.

## Conclusion

The Mapping Metaphor project has used the *Historical Thesaurus* database to investigate the development of metaphor in English, by identifying lexical overlap between different semantic categories. While the project covers all areas of semantic meaning, connections contained within the first primary division of the HT, The World, will be of particular interest to place name scholars. It is hoped that the data contained within the Metaphor Map will be used alongside place name evidence, with a view to enhancing understanding of the relationship between names and lexis.

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